74. (New) The microscopy method according to claim 72, wherein at least a portion of the first optics is rotatable about an axis, and wherein the at least one optical parameter comprises a rotational position of the portion of the first optics.

75. (New) The microscopy method according to claim 72, wherein a magnification of the first optics is changeable, and wherein the at least one optical parameter comprises the magnification of the first optics.

72. (New) A microscopy method for displaying a magnified image of an object plane to plural observers, the method comprising:

light optically generating a first image of the object plane using first optics;

light optically generating a second image of the object plane using second optics, the second optics being distinct from the first optics,

wherein the first optics has at least one optical parameter which is adjustable independently of a corresponding optical parameter of the second optics;

wherein the method further comprises:

processing a first electronic input image in dependence of the at least one optical parameter of the first optics, processing a second electronic input image independently of the at least one optical parameter of the first optics, combining the processed first and second electronic input images to generate a first electronic output image, and displaying the first electronic output image in superposition with the first image of the object plane; and

processing the first electronic input image, processing the second electronic input image, combining the processed first and second electronic input images to generate a second electronic output image, and displaying the second electronic output image in superposition with the second image of the object plane.

73. (New) The microscopy method according to claim 72, wherein the at least one optical parameter is continuously variable between a first value and a second value.

69. (New) The microscopy system according to claim 68, further comprising a position sensor for detecting a setting of components of the first zoom system with respect to each other, and

wherein the controller is configured to determine the first scale factor based on the detected setting.

70. (New) The microscopy system according to claim 68, wherein the first ocular system comprises a first camera and the second ocular system comprises a second camera, and wherein the controller is configured to determine the first scale factor based on a comparison of an image detected the first camera and an image detected by the second camera.

71. (New) The microscopy system according to claim 68, wherein the second ocular system comprises a second zoom system for changing a second magnification provided by the second ocular system,

wherein the at least one optical setting of the second ocular system comprises the second magnification, and

wherein the controller is configured to scale the first electronic input image with a second scale factor determined in dependence of the second magnification.

66. (New) The microscopy system according to claim 65, wherein the first ocular system comprises a first camera and the second ocular system comprises a second camera, and wherein the controller is configured to determine the first image rotation angle based on a comparison of an image detected by the first camera and an image detected by the second camera.

67. (New) The microscopy system according to claim 64, wherein the second ocular tube of the second ocular system is rotatable about the optical axis,

wherein the optical setting of the second ocular system comprises a rotational position of the second ocular tube about the optical axis, and

wherein the controller is configured to rotate the first electronic input image by a second image rotation angle determined in dependence of the rotational position of the second ocular tube.

68. (New) The microscopy system according to claim 65, wherein the first ocular system comprises a first zoom system for changing a first magnification provided by the first ocular system,

wherein the at least one optical setting of the first ocular system comprises the first magnification, and

wherein the controller is configured to scale the first electronic input image with a first scale factor determined in dependence of the first magnification.

62. (New) The microscopy system according to claim 55, wherein the second ocular system comprises a pair of second ocular tubes to enable the second observer to stereoscopically observe the object.

63. (New) The microscopy system according to claim 55, wherein the first ocular system comprises a first camera and the second ocular system comprises a second camera, and wherein the controller is configured to determine the at least one optical setting of the first ocular system based on a comparison of an image detected by the first camera with an image detected by the second camera.

64. (New) The microscopy system according to claim 55, wherein the objective lens arrangement has an optical axis, wherein the first ocular tube of the first ocular system is rotatable about the optical axis,

wherein the at least one optical setting of the first ocular system comprises a rotational position of the first ocular tube about the optical axis, and

wherein the controller is configured to rotate the first electronic input image by a first image rotation angle determined in dependence of the rotational position of the first ocular tube.

65. (New) The microscopy system according to claim 64, further comprising an angle detector for detecting an angle of the first ocular tube of the first ocular system relative to a housing of the objective lens arrangement, and wherein the controller is configured to determine the first image rotation angle based on the detected angle.

58. (New) The microscopy system according to claim 55, wherein at least one optical setting of the second ocular system is adjustable independently of the at least optical setting of the first ocular system, and wherein the controller is further configured for processing the first electronic input image in dependence of the at least one optical setting of the second ocular system, and for processing the second electronic input image independently of the at least one optical setting of the second ocular system, and for combining the processed first and second electronic input images to generate the electronic output image.

59. (New) The microscopy system according to claim 58, wherein the at least one optical setting of the first ocular system comprises at least one of a setting of an angular position of the first ocular tube about an optical axis of the at least one objective lens arrangement, and a setting of a magnification of a zoom system of the first ocular tube.

60. (New) The microscopy system according to claim 59, wherein the at least one optical setting of the second ocular system comprises at least one of a setting of an angular position of the second ocular tube about an optical axis of the at least one objective lens arrangement, and a setting of a magnification of a zoom system of the second ocular tube.

61. (New) The microscopy system according to claim 55, wherein the first ocular system comprises a pair of first ocular tubes to enable the first observer to stereoscopically observe the object.

and a second image displayed by the second display in superposition by looking into the second ocular; and

a controller configured for processing a first electronic input image in dependence of the at least one optical setting of the first ocular system, for processing a second electronic input image independently of the at least one optical setting of the first ocular system, for combining the processed first and second electronic input images to generate a first electronic output image, and for supplying the first electronic output image to the first display wherein the controller is further configured for processing the first electronic input image and the second electronic input image, for combining the processed first and second electronic input images to generate a second electronic output image, and for supplying the second electronic output image to the second display.

56. (New) The microscopy system according to claim 55, wherein the at least one optical setting of the first ocular system comprises at least one of a setting of an angular position of the first ocular tube about an optical axis of the at least one objective lens arrangement, and a setting of a magnification of a zoom system of the first ocular tube.

57. (New) The microscopy system according to claim 55, wherein the at least one optical setting is continuously variable between a first value and a second value.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

35 - 54. **CANCELED**

55. (New) A microscopy system for observing an object by plural observers, the system comprising:

at least one objective lens arrangement for receiving an object side beam emanating from an object plane and for transforming the object side beam into an image side beam;

a first ocular system comprising a first ocular tube including a first ocular, and a first image projector including a first display, wherein the first ocular system provides a first beam path from the objective lens arrangement to the first ocular, and a second beam path from the first display to the first ocular, to enable a first observer to observe the object and a first image displayed by the first display in superposition by looking into the first ocular, wherein at least one optical setting of the first ocular system is adjustable;

a second ocular system comprising a second ocular tube including a second ocular, and a second image projector including a second display, wherein the second ocular system provides a third beam path from the objective lens arrangement to the second ocular, and a fourth beam path from the second display to the second ocular, to enable a second observer to observe the object